

FIG. 6 is a schematic block diagram illustrating the use of messaging servers during the operation of a fax sent via email messaging mode in a presently preferred embodiment of the present invention.

FIG. 7 is a schematic block diagram showing the operation of a fax received as email messaging mode in a presently preferred embodiment of the present invention.

FIG. 8 is a schematic block diagram illustrating the use of messaging servers during the operation of a fax received as email messaging mode in a presently preferred embodiment of the present invention.

FIG. 9A is a diagram of a standard telephone keypad illustrating the preferred method of using the keypad to send Internet mail addresses in the presently preferred embodiment of the present invention.

FIG. 9B is a diagram of a standard telephone keypad button illustrating the preferred method of using the keypad to send Internet mail addresses in the presently preferred embodiment of the present invention.

FIG. 10 is a schematic block diagram showing the operation of a fax presented via web page messaging mode in a presently preferred embodiment of the present invention.

FIG. 11 is a schematic block diagram illustrating the use of messaging servers during the operation of a fax presented via web page messaging mode in a presently preferred embodiment of the present invention.

FIG. 12 is a schematic block diagram showing the operation of a voice to voice messaging mode in a presently preferred embodiment of the present invention.

FIG. 13 is a schematic block diagram illustrating the use of messaging servers during the operation of a voice to voice messaging mode in a presently preferred embodiment of the present invention.

FIG. 14 is a schematic block diagram showing the operation of a voice sent via email messaging mode in a presently preferred embodiment of the present invention.

FIG. 15 is a schematic block diagram illustrating the use of messaging servers during the operation of a voice sent via email messaging mode in a presently preferred embodiment of the present invention.

FIG. 16 is a schematic block diagram showing the operation of a voice presented as web page messaging mode in a presently preferred embodiment of the present invention.

FIG. 17 is a schematic block diagram illustrating the use of messaging servers during the operation of a voice presented as web page messaging mode in a presently preferred embodiment of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

In the following description, a preferred embodiment of the invention is described with regard to preferred process steps and data structures. Those skilled in the art would recognize after perusal of this application that embodiments of the invention can be implemented using circuitry in a microprocessor adapted to the particular process steps and data structures, and that implementation of the process steps and data structures described herein would not require undue experimentation or further invention.

FIG. 1 is a schematic block diagram of a messaging system in a presently preferred embodiment of the present invention.

The present invention provides messaging between disparate messaging interfaces that may employ different mes-

saging formats and that may use different networks. For example as shown in FIG. 1, the messaging interfaces may include a telephone 110, a fax machine 112, an email server 114, and/or a network terminal 116 such as a personal computer running a messaging application such as an email program or a browser program. The messaging interfaces may be coupled to different networks such as an area network 118, a telephone network 120, an intranet, or a switchable network such as the Internet 122. An area network 118 is defined as any network supporting distributed or centralized computing such as a local area network (LAN), a wide area network (WAN), or an intranet. An intranet is defined as a network that links more than one type of network such as a network that links a Novell network and a Windows NT network using an Internet protocol such as the TCP/IP protocol.

FIG. 1 also shows a server 124 or similar computing system that receives delivery information 126 and an incoming message 128 having a content format of a first type, converts the content format of a first type to a processed message having a content format of a second type using the delivery information, provides notification to an intended recipient using the delivery information, and presents the processed message having a content format of a second type to the intended recipient.

The server 124 provides the above by having a first network interface that can support the sending and receiving of messages and delivery information on a network. For example, the first network interface may be a telephone interface 130 which is linked to a first network such as telephone network 120. A telephone network 120 as used herein includes a public switch telephone network 120 (PSTN), central office (E1, T1, etc.), local private branch exchange (PBX) 132, cellular network, or any network that supports voice communication and destination addressing typically found in a standard telephone network. As generally known, a standard telephone network supports user terminals that typically include a telephone 110 and a fax machine 112. The telephone interface 130 is responsible for managing voice and facsimile communication such as answering incoming telephone calls as well as making outgoing calls through the telephone network 120.

The server 124 also has a second network interface that can support the sending and receiving of a message and delivery information on a network. For example, the second network interface may be an area network interface 136 that is linked to an area network and communicates with an area network server such as email server 114 which is connected to the area network. This permits the server 124 via the area network interface 136 to send and receive email messages from the email server 114 or from area network clients such as personal computers 138 and workstations 140 which typically provide messaging capabilities and graphical user interfaces ("GUI"), as known in the art. The area network interface 136 can also be configured to provide the functions of the email server 114.

A sender or a recipient may either be a subscriber or non-subscriber and has the option of using any one of the following types of messaging interfaces such as a telephone 110, fax machine 112, email messaging program, or a web browser program. The messaging interfaces may be linked to a telephone network 120, an area network 118, a remote server 141, or directly to the Internet 122 through an internet service provider (ISP) using a personal computer 142 having a messaging interface such as a voice, fax, email program 144 or web browser program 146.

It is presently contemplated that the present invention is not limited to the above types of telecommunications net-